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Digital Testing

Ligada iSuite for HbbTV Pro
Network Simulation for DASH

Ligada iSuite

HbbTV

The Ligada iSuite for HbbTV Pro is an extension of Ligada iSuite for HbbTV with additional advanced features and test cases. It allows receiver manufacturers to optimise the device performance under various network conditions. Ligada iSuite offers technology and a large set of test cases that validate the stability and performance of HbbTV MPEG-DASH platforms when faced with scenarios containing multiple, simultaneous, network impairment patterns.

New Key Features of Ligada iSuite Test Harness:

- Emulation for the 'real life' network with Network Shaping API which configures the key variables of network shaping (e.g. Bandwidth, Delay, Packet Loss, etc).
- Directly monitoring the network situations and file transferring between the HBBTV receiver and Test Harness through a dedicated "Network Activity" window.
- Interactive test framework for maximum usability. Providing various test steams as conforming to HbbTV DASH Profiles.
- Ability to create new and modify existing network emulation setup using self-defined MPEG-DASH test vectors.

Key Features of Ligada iSuite HbbTV Pro Test Cases:

- Comprising of Ligada iSuite Test Harness, HbbTV Pro Test Suite includes 90 test cases with combinations of 15 different HbbTV MPEG-DASH test vectors and 12 multiple simultaneous network impairment patterns.
- The network impairment patterns are defined based on industrial standards and studies for network latencies (test patterns defined in recommendation ITU-T G.1050). All patterns are designed to stress the rate adaption algorithm of receiver under test and to simulate the "real life" stepped Bandwidth (Throttle)/Delay/Packet Loss variations.
- The HbbTV MPEG-DASH test vectors include various adaptation and segment settings that conform to HbbTV MPEG-DASH specifications. The adaptation sets contain the majority of resolutions from SD to HD. As defined in the segment settings, the media contents are offered via number-based templates and time-based templates which comply to ISO BMFF Live Profile.

Key Benefits of Ligada iSuite HbbTV Pro:

- Manufacturers can accurately predict the performance of their device in the real world, and not in error-free lab conditions, so that switching between DASH representations is as expected which maximises user-experience.

- Engineering teams can view the device's performance when faced with problematic network environments, in real-time.
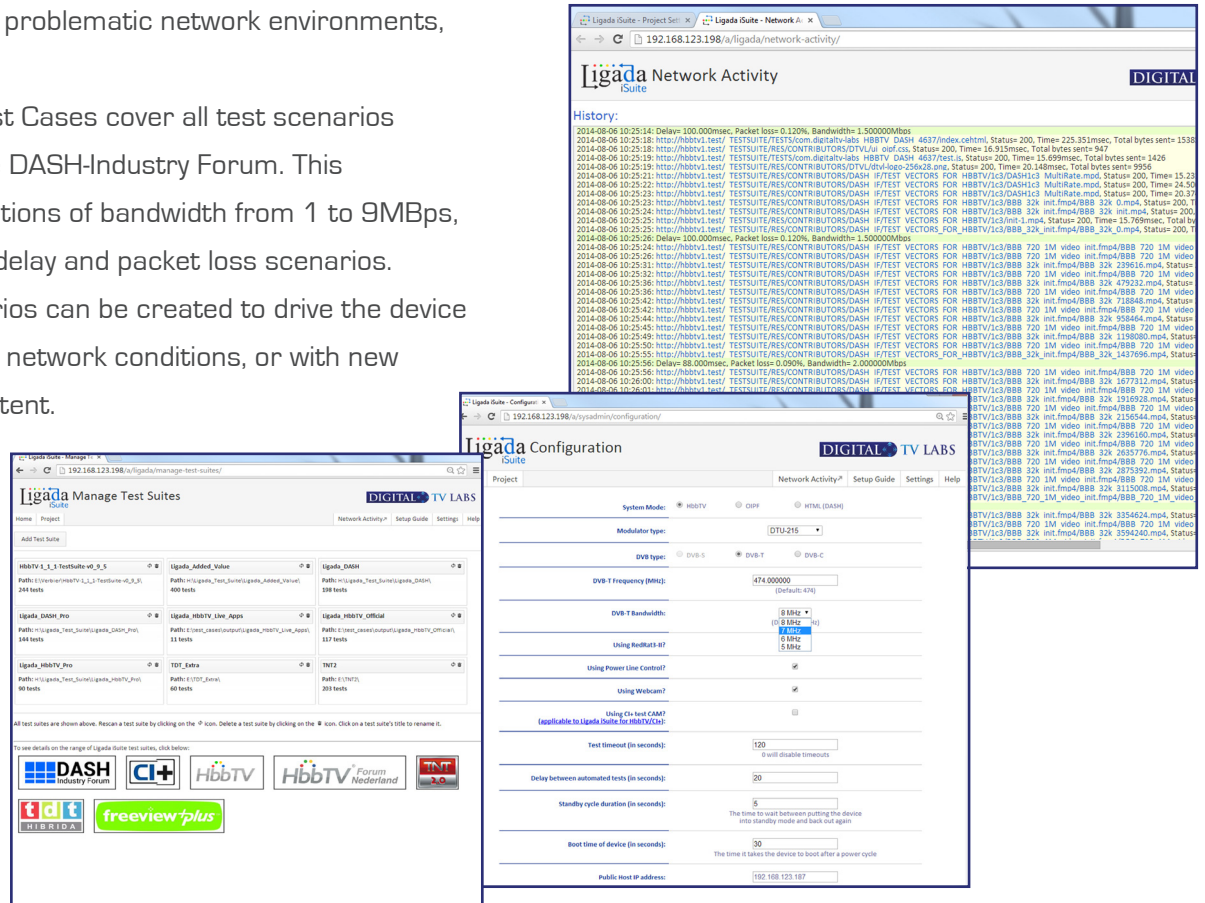
- The supplied Test Cases cover all test scenarios described by the DASH-Industry Forum. This comprises conditions of bandwidth from 1 to 9MBps, and a variety of delay and packet loss scenarios.

- New test scenarios can be created to drive the device with customised network conditions, or with new DASH Video content.

Ligada iSuite for HbbTV Pro enables customers to stress test their HbbTV DASH implementations cost effectively, without the need for expensive dedicated hardware or software solutions to replicate network impairments. Additionally, all test projects can be managed within the central Test Harness, meaning that results are captured and reports are created within the same framework.

About Eurofins Digital Testing

Eurofins Digital Testing is the world's leading end-to-end Quality Assurance (QA) service provider for Digital TV Operators and device testing specialists, operating globally with test lab facilities in the UK, Belgium and Hong Kong. We provide specialised on-site test resources, testing tools and services to validate digital media delivery systems and device conformance for multiple standards and operators across the world. Eurofins Digital Testing was formed from the merger of Digital TV Labs and Testronic Labs and is part of the Eurofins Group. Eurofins has a network of more than 200 laboratories in 36 countries and has over 17,000 employees worldwide. Eurofins Digital Testing delivers complete testing solutions to manufacturers, broadcasters, operators and related media and device supply chains, covering terrestrial, satellite, cable, OTT and IPTV delivery.

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